ABSTRACT AND BIOGRAPHY

Agencywide Benefits from Diverse Broad-Based Teams

In the five years since its creation, the NASA Engineering and Safety Center (NESC) has advanced the art of building broad-based diverse technical teams to effectively investigate NASA's most critical engineering and scientific issues. NESC teams are built with peer-recognized experts from across the Agency, combined with experts from industry, academia, and other U.S. Government Agencies. By deliberate design, these teams are assembled to be diverse in thought and experience, and to be interdisciplinary and cross-generational. This diversity creates benefits for the Agency, its Centers, its Programs, its Projects, and its people, thereby assuring continued technical excellence now and in the years to come.

The foremost benefit realized by the Agency from the NESC's broad-based diverse teams is better decisions. Near-term decisions are improved by insightful technically-grounded team findings and recommendations, and long-term decisions are improved because participating team members substantially improve their decision-making skills. NASA Programs and Projects benefit from the innovative solutions that result from the diversity of thought and experience reflected on these teams. Everyone in the Agency benefits from the inter-center networks of expertise that are created, and from the proliferation of the NESC's safety culture.

Two Case Studies, Composite Crew Module (CCM), and Max Launch Abort System (MLAS), will follow within this track to exemplify how these teams create better decisions, more-experienced decision-makers, and innovative solutions for the Agency, while creating valuable expert networks that persist and spread the NESC's safety culture throughout the Agency.

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Mike Kelly is a Back-up Principal Engineer in the NASA Engineering and Safety Center (NESC). After earning a B.S. degree in Aerospace Engineering from the University of Illinois, Mike worked for 23 years at McDonnell Douglas / Boeing in Long Beach and Huntington Beach, California, and at the FAA Los Angeles Aircraft Certification Office (LAACO).

Mike's industry experience included dynamic loads analysis on commercial and military aircraft design programs, and flight test engineering on a military transport aircraft design certification program. The flight test team was comprised of a mix of industry, military and civil servant engineers and technicians. Mike later served on the company's Engineering Incident Board, where he led interdisciplinary teams of engineers and technicians to investigate structural incidents and accidents on commercial aircraft. In this capacity, he also teamed with the FAA, the NTSB (and foreign equivalents), and

with aircraft operator personnel (domestic and foreign). Mike also chaired a monthly "partnership" meeting between company and FAA regulatory engineers, where planned service actions to mitigate identified risks were candidly discussed. In 2004 Mike left industry to work for the FAA LAACO, where he led interdisciplinary teams to assess whether design data submitted by certificate applicants complied with federal regulations.

Mike transferred from the FAA to the NESC in 2006, to bring his diverse experience, project management skills and unique perspective to bear on NASA's critical technical issues. His experience leading diverse teams of people from wide-ranging backgrounds adds relevance to this presentation.